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NOTICE OF ALLOWANCE AND FEE(S) DUE

39310

7590

12/16/2009

MBHB/TRADING TECHNOLOGIES 300 SOUTH WACKER DRIVE SUITE 3200 CHICAGO, IL 60606 EXAMINER

KANERVO, VIRPI H

ART UNIT PAPER NUMBER

3691

DATE MAILED: 12/16/2009

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/676.641	10/01/2003	Steven F. Borsand	03-901	7876

TITLE OF INVENTION: SYSTEM AND METHOD FOR DYNAMIC QUANTITY ORDERS IN AN ELECTRONIC TRADING ENVIRONMENT

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$755	\$0	\$0	\$755	03/16/2010

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

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If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

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If the SMALL ENTITY is shown as NO:

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B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

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Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE

Commissioner for Patents P.O. Box 1450

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INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for

maintenance fee notifications. Note: A certificate of mailing can only be used for domestic mailings of the CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address) Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission. 39310 7590 12/16/2009 Certificate of Mailing or Transmission MBHB/TRADING TECHNOLOGIES I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below. 300 SOUTH WACKER DRIVE **SUITE 3200** CHICAGO, IL 60606 (Depositor's name (Signature (Date APPLICATION NO. FILING DATE FIRST NAMED INVENTOR ATTORNEY DOCKET NO. CONFIRMATION NO. 10/676.641 10/01/2003 Steven F. Borsand 7876 TITLE OF INVENTION: SYSTEM AND METHOD FOR DYNAMIC QUANTITY ORDERS IN AN ELECTRONIC TRADING ENVIRONMENT APPLN. TYPE SMALL ENTITY ISSUE FEE DUE PUBLICATION FEE DUE PREV. PAID ISSUE FEE TOTAL FEE(S) DUE DATE DUE nonprovisional YES \$755 \$0 \$0 \$755 03/16/2010 **EXAMINER** ART UNIT CLASS-SUBCLASS KANERVO, VIRPI H 3691 705-035000 1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363). 2. For printing on the patent front page, list (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached. (2) the name of a single firm (having as a member a ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required. registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type) PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment. (A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY) 4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above) 4a. The following fee(s) are submitted: lssue Fee A check is enclosed. Publication Fee (No small entity discount permitted) Payment by credit card. Form PTO-2038 is attached. The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number ______ (enclose an extra copy of this fo Advance Order - # of Copies _ (enclose an extra copy of this form). 5. Change in Entity Status (from status indicated above) a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ■ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2). NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office. Authorized Signature Date Typed or printed name Registration No. This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/676,641	10/01/2003	Steven F. Borsand	03-901	7876
39310 75	590 12/16/2009		EXAMINER	
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300 SOUTH WAC	CKER DRIVE		ART UNIT	PAPER NUMBER
SUITE 3200 CHICAGO, IL 60606			3691 DATE MAILED: 12/16/200	9

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 1220 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 1220 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 (571)-272-4200.

	Application No.	Applicant(s)	
	10/676,641	BORSAND, STEVEN F.	
Notice of Allowability	Examiner	Art Unit	
	VIRPI H. KANERVO	3691	
The MAILING DATE of this communication appe All claims being allowable, PROSECUTION ON THE MERITS IS herewith (or previously mailed), a Notice of Allowance (PTOL-85) NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RI of the Office or upon petition by the applicant. See 37 CFR 1.313	(OR REMAINS) CLOSED in or other appropriate commits (GHTS). This application is	n this application. If not included unication will be mailed in due cours	se. THIS
1. This communication is responsive to <u>Amendment filed on 0</u>	<u>06/02/2009</u> .		
2. X The allowed claim(s) is/are <u>1,3-8,10,11,13-16,19-24 and 26</u>	<u>6-29</u> .		
3. ☐ Acknowledgment is made of a claim for foreign priority una) ☐ All b) ☐ Some* c) ☐ None of the: 1. ☐ Certified copies of the priority documents have 2. ☐ Certified copies of the priority documents have 3. ☐ Copies of the certified copies of the priority documents have International Bureau (PCT Rule 17.2(a)). * Certified copies not received:	been received. been received in Applicati	on No	rom the
Applicant has THREE MONTHS FROM THE "MAILING DATE" noted below. Failure to timely comply will result in ABANDONM THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.	IENT of this application.		
 A SUBSTITUTE OATH OR DECLARATION must be subm INFORMAL PATENT APPLICATION (PTO-152) which give 			E OF
5. CORRECTED DRAWINGS (as "replacement sheets") mus	st be submitted.		
(a) \square including changes required by the Notice of Draftspers	on's Patent Drawing Revie	w(PTO-948) attached	
1) ☐ hereto or 2) ☐ to Paper No./Mail Date			
(b) ☐ including changes required by the attached Examiner's Paper No./Mail Date			
Identifying indicia such as the application number (see 37 CFR 1, each sheet. Replacement sheet(s) should be labeled as such in t) of
DEPOSIT OF and/or INFORMATION about the depo- attached Examiner's comment regarding REQUIREMENT			he
Attachment(s)			
1. Notice of References Cited (PTO-892)	<u> </u>	nformal Patent Application	
2. Notice of Draftperson's Patent Drawing Review (PTO-948)	Paper No.	Summary (PTO-413), /Mail Date	
 Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date 	7. 🔼 Examiners	Amendment/Comment	
4. Examiner's Comment Regarding Requirement for Deposit of Biological Material		Statement of Reasons for Allowand	æ
	9.	<u>_</u> .	
	/Alexander Ka Supervisory Pa	alinowski/ utent Examiner, Art Unit 3691	

Application/Control Number: 10/676,641

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DETAILED ACTION

1. Claims 1, 3-8, 10-11, 13-16, 19-24, and 26-29, are presented for

examination. Applicant filed amendment on 06/02/2009 amending claims

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1, 4-7, 11, 16, 19-21, 24, and 28-29; and canceling claims 9, 12, 18, and

25. After carefully reviewing Applicant's amendment, Examiner withdraws

the outstanding rejection of claims 1, 3-8, 10-11, 13-16, 19-24, and 26-29.

Therefore, claims 1, 3-8, 10-11, 13-16, 19-24, and 26-29, are ALLOWED.

Examiner's Amendment

2. An examiner's amendment to the record appears below. Should the

changes and/or additions be unacceptable to applicant, an amendment

may be filed as provided by 37 CFR § 1.312. To ensure consideration of

such an amendment, it MUST be submitted no later than the payment of

the issue fee.

Authorization for this examiner's amendment was given in a telephone

interview with attorney Adam Faier on October 1, 2009.

IN THE CLAIMS:

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1. (Currently Amended) A method for dynamic quantity orders in an electronic trading environment, the method comprising:

receiving a dynamic quantity order by a computing device of an electronic exchange, wherein the dynamic quantity order comprises a price and a desired order quantity, wherein the dynamic quantity order is associated with an order quantity by the computing device of the electronic exchange, wherein the order quantity is initially the desired order quantity, wherein the dynamic quantity order is placed into an order queue based on the price;

estimating by the computing device of the electronic exchange a potential order quantity at the price, wherein the potential order quantity represents an estimate of an amount of quantity that will be filled at the price;

increasing by the computing device of the electronic exchange the order quantity to an increased order quantity based on the potential order quantity; and dynamically adjusting by the computing device of the electronic exchange the order quantity based on a total **order** quantity in the order queue at the price.

- 2. (Cancelled)
- 3. (Previously Presented) The method of claim 1, wherein the order queue is processed by the electronic exchange such that orders are filled based on a prorata priority.
 - 4. (Previously Presented) The method of claim 3, further comprising: when the dynamic quantity order is received at the electronic exchange, assigning by the computing device of the electronic exchange a first weight parameter to the dynamic quantity order based on the desired order quantity and the total order quantity in the order queue, wherein the order quantity is increased to the increased order quantity further based on the first weight parameter.
- 5. (Previously Presented) The method of claim 1, wherein the dynamic quantity order further comprises a percentage.

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6. (Currently Amended) The method of claim 5, wherein **the step of** estimating the potential order quantity is further based on the percentage.

- 7. (Currently Amended) The method of claim 1, wherein the step of estimating the potential order quantity is based on a default set by the electronic exchange.
 - 8. (Previously Presented) The method of claim 4, further comprising:
 when the order quantity associated with the dynamic quantity order is
 increased, assigning a second weight parameter to the dynamic quantity order,
 wherein the second weight parameter is determined based on the increased order

quantity and a new total order quantity in the order queue at the price.

- 9. (Cancelled)
- 10. (Original) The method of claim 1, further comprising: detecting a filled order quantity associated with the dynamic quantity order;

determining that the filled order quantity is not lower than the desired order quantity of the dynamic quantity order; and

attempting to delete a remaining order quantity associated with the increased order quantity.

11. (Currently Amended) The method of claim 1, further comprising:

detecting a filled order quantity associated with the dynamic quantity order;

determining that the filled order quantity is lower **that than** the desired order quantity of the dynamic quantity order; and

dynamically adjusting the increased order quantity based on a new **total** order quantity in the order queue at the price.

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12. (Cancelled)

13. (Currently Amended) The method of claim 1, further comprising:

applying a fee <u>for increasing the order quantity</u> to be paid by a trader associated with the dynamic quantity order for increasing the order quantity.

- 14. (Currently Amended) The method of claim 13, wherein at least a portion of the fee is **to be** paid to the electronic exchange.
- 15. (Currently Amended) The method of claim 13, wherein the fee is **to be** paid when at least a portion of the order quantity is filled.
- 16. (Currently Amended) A method for dynamic quantity orders in an electronic trading environment, the method comprising:

sending a dynamic quantity order by a client device to an electronic exchange, wherein the dynamic quantity order comprises a price and a desired order quantity **to be filled**;

receiving the dynamic quantity order by a computing device of the electronic exchange, wherein the dynamic quantity order is associated with an order quantity by the computing device of the electronic exchange, wherein the order quantity is initially the desired order quantity;

placing by the computing device of the electronic exchange the dynamic quantity order in a pro-rata order queue at the price;

estimating by the computing device of the electronic exchange a potential order quantity at the price, wherein the potential order quantity represents an estimate of an amount of quantity that will be filled at the price;

increasing by the computing device of the electronic exchange the order quantity of the dynamic quantity order based on the potential order quantity; and

dynamically adjusting by the computing device of the electronic exchange the increased order quantity based on a current total <u>order</u> quantity in the <u>pro-rata</u> order queue at the price.

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17-18. (Cancelled)

19. (Currently Amended) The method of claim 16, further comprising:

when the dynamic quantity order is received at the electronic exchange, assigning by the computing device of the electronic exchange a first weight parameter to the dynamic quantity order based on the desired order quantity and the current total **available** order quantity in the pro-rata order queue at the price, wherein the order quantity is increased to the increased order quantity further based on the first weight parameter.

- 20. (Previously Presented) The method of claim 16, wherein the dynamic quantity order further comprises a percentage.
- 21. (Currently Amended) The method of claim 20, wherein **the step of** estimating the potential order quantity is further based on the percentage.
 - 22. (Currently Amended) The method of claim 19, further comprising:

when the order quantity associated with the dynamic quantity order is increased, assigning a second weight parameter to the dynamic quantity order, wherein the second weight parameter is determined based on the increased order quantity and a new current total order quantity in the **pro-rata** order queue at the price.

23. (Original) The method of claim 16, further comprising:

detecting a filled order quantity associated with the dynamic quantity order;

determining that the filled order quantity is not lower than the desired order quantity of the dynamic quantity order; and

attempting to delete a remaining order quantity associated with the increased order quantity.

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24. (Currently Amended) The method of claim 16, further comprising: detecting a filled order quantity associated with the dynamic quantity order;

determining that the filled order quantity is lower than the desired order quantity of the dynamic quantity order; and

dynamically adjusting the increased order quantity based on a new current total <u>order</u> quantity in the <u>pro-rata</u> order queue at the price.

- 25. (Cancelled)
- 26. (Currently Amended) The method of claim 16, further comprising: applying a fee <u>for increasing the order quantity</u> to be paid by a trader associated with the dynamic quantity order.
- 27. (Currently Amended) The method of claim 26, wherein the fee is **to be** paid when at least a portion of the order quantity associated with the dynamic quantity order is filled.
- 28. (Currently Amended) A computer readable medium having stored therein instructions executable by a processor to perform a method comprising:

receiving a dynamic quantity order by a computing device of an electronic exchange, wherein the dynamic quantity order comprises a price and a desired order quantity, wherein the dynamic quantity order is associated with an order quantity by the computing device of the electronic exchange, wherein the order quantity is initially the desired order quantity, wherein the dynamic quantity order is placed into an order queue based on the price;

estimating by the computing device of the electronic exchange a potential order quantity at the price, wherein the potential order quantity represents an estimate of an amount of quantity that will be filled at the price;

increasing by the computing device of the electronic exchange the order quantity to an increased order quantity based on the potential order quantity; and

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dynamically adjusting by the computing device of the electronic exchange the order quantity based on a total <u>order</u> quantity in the order queue at the price.

29. (Currently Amended) A computer readable medium having stored therein instructions executable by a processor to perform a method comprising:

sending a dynamic quantity order by a client device to an electronic exchange, wherein the dynamic quantity order comprises a price and a desired order quantity **to be filled**;

receiving the dynamic quantity order by a computing device of the electronic exchange, wherein the dynamic quantity order is associated with an order quantity by the computing device of the electronic exchange, wherein the order quantity is initially the desired order quantity;

placing by the computing device of the electronic exchange the dynamic quantity order in a pro-rata order queue at the price;

estimating by the computing device of the electronic exchange a potential order quantity at the price, wherein the potential order quantity represents an estimate of an amount of quantity that will be filled at the price;

increasing by the computing device of the electronic exchange the order quantity of the dynamic quantity order based on the potential order quantity; and

dynamically adjusting by the computing device of the electronic exchange the increased order quantity based on a current total <u>order</u> quantity in the <u>pro-</u>
<u>rata</u> order queue at the price.

Allowable Subject Matter

3. Claims 1, 3-8, 10-11, 13-16, 19-24, and 26-29, are allowed. The following is a statement of reasons for the indication of allowable subject matter:

The claimed invention is directed to a method for adjusting dynamic quantity orders in an electronic trading environment.

The prior art of record, Nordlicht et al., US patent publication No. 2002/0194115 A1, teaches a system and a method for receiving a dynamic quantity order at an electronic exchange, wherein the dynamic quantity order is received in a message comprising a price and a desired order quantity, wherein the dynamic quantity order is associated with an order quantity, wherein the order quantity is initially the desired order quantity, and wherein the dynamic quantity order is sorted based on the price into an order queue; and dynamically adjusting at the electronic exchange the order quantity based on a total quantity in the order queue at the price.

However, the prior art fails to teach a method for performing a sequence of steps of: "estimating a potential order quantity at the price, wherein the potential order quantity represents an estimate of an amount of quantity that will be filled at the price," and "increasing the order quantity to an increased order quantity based on the potential order quantity."

These features are found in independent claims 1, 16, 28, and 29. Therefore, independent claims 1, 16, 28, and 29, are allowable. Claims 3-8, 10-11, and 13-15, are dependent claims depending from independent claim 1; and claims 19-24 and 26-27 are dependent claims depending from independent claim 16. Therefore, dependent claims 3-8, 10-11, 13-15, 19-24, and 26-27, are also allowable.

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Foley (2003/0216932 A1) discloses automated trading of financial interests.

Silverman (5,136,501) discloses anonymous matching system.

Davidowitz (2004/0267655 A1) discloses method and system for initiating pairs trading across multiple market having automatic foreign exchange price hedge

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Haslett, Tim; Osborne, Charles; Local Rules: Their Application in a

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Kanban System; International Journal of Operations & Production

Management, v20n9 pp1078-1092 (2000)

Thondavadi, Nandu N; Raza, Amir; Information Management Key to ISO

9001; Molding Systems, v56n7 pp 20-25 (September 1998)

Watts, Charles A; Hahn, Chan K; Sohn, Byung-Kyu; Monitoring the

Performance of a Reorder Point System: A Control Chart Approach;

International Journal of Operations & Production Management, v14n2

pp51-61 (1994)

McKague, Anne; Hooked on Technology; Canadian Datasystems, v23n10

pp 24-26 (October 1991)

4. Any inquiry concerning this communication or earlier communications from

the examiner should be directed to VIRPI H. KANERVO whose telephone

number is (571)272-9818. The examiner can normally be reached on

Monday - Thursday, 8:00 a.m. - 5:00 p.m., EST. If attempts to reach the

examiner by telephone are unsuccessful, the examiner's supervisor,

Alexander G. Kalinowski can be reached on (571) 272-6771. The fax

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phone number for the organization where this application or proceeding is

assigned is 571-273-8300.

5. Information regarding the status of an application may be obtained from

the Patent Application Information Retrieval (PAIR) system. Status

information for published applications may be obtained from either Private

PAIR or Public PAIR. Status information for unpublished applications is

available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on

access to the Private PAIR system, contact the Electronic Business

Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from

a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-

1000.

Virpi H. Kanervo

/Alexander Kalinowski/

Supervisory Patent Examiner, Art Unit 3691